

REMARKS

By the present amendment, claims 1, 9 and 18 have been amended. Claims 5, 6, 8, 10, 14, and 21-23 were previously canceled. No other claims have been canceled. No new matter has been entered.

Claims 1-4, 7, 9, 11-13, and 15-20 are currently pending in the application. Reconsideration and allowance of all of the claims is respectfully requested in view of the following remarks.

In regard to Rejection of Claims 1-3, 9, 11-13, 15-18 and 20 Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 1-3, 9, 11-13, 15-18 and 20 under 35 U.S.C. § 103(a) as being unpatentable over JP 62-115647 in view of JP 9-259840.

Claim 1 has been amended to recite an interconnection between the discrete metallic flat portions as follows:

...a) a rigid structural shell made of reinforced plastic or polymer material, said structural shell having four sides and an end portion, an outer surface and an inner surface, said structural shell being made of a molded plastic or polymer material reinforced with a plurality of discrete metallic flat portions embedded in said outer surface of said structural shell, said inner surface defining a void area suitable for containing an electrochemical cells battery, some of the discrete metallic flat portions being orthogonally interconnected to simultaneously reinforce a plurality of sides and the end portion of the rigid structural shell that cooperate with the reinforced plastic or polymer material to form a reinforcement wall at the end portion of the rigid structural shell;...

Support for this amendment is found, *inter alia*, in paragraph [0052] of the description and in Figure 9.

The Examiner cites JP '647 that teaches a *negative electrode absorbing type sealed lead-acid battery* (title). A reinforcement rib (8) is disclosed therein. The single piece reinforcement rib is mounted crosswise on one side of the container to reinforce the container. The reinforcement rib is formed by insert molding an iron core in polypropylene, and melt-bonded in parallel to the electrode on the container side.

JP '647 fails to disclose, teach, or suggest discrete metallic flat portions being orthogonally interconnected to simultaneously reinforce a plurality of sides and the end portion of the container and to form a reinforcement wall at the end portion of the container.

The Examiner has cited JP '647 in view of JP '840. JP '840 teaches a *battery jar for sealed secondary battery* (title). This reference is directed to a lead-acid or alkaline secondary battery jar comprising plastic such as polypropylene. The jar is provided with a liner impervious to oxygen and humidity. No reference is made to reinforcements of the jar with metallic flat portions. Moreover, Applicants submit that a person skilled in the art would not even consider JP' 840 as a reference disclosing a reinforced structural shell as defined in claim 1.

Therefore, JP'647 does not teach all of the features recited in amended claim 1 and JP' 840 fails to remedy the deficiencies of JP '647. As such, the Examiner is requested to withdraw his rejection of claim 1 and claim 2, 3, 9, 11-13, 15-18 and 20 depending from claim 1.

In regard to Rejection of Claim 4 Under 35 U.S.C. § 103(a)

The Examiner has rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over JP 62-115647 in view of JP 9-259840, and further in view of Langan et al US 6,838,209.

Langan teaches a *flexible thin battery and method of manufacturing same* (title). The thin battery packaging material comprises a laminate of several discrete layers. The laminate comprises a conductive layer sandwiched between an inner heat or pressure sealable polymer layer and an outer polymer layer. (Column 2, lines 43-46)

Langan fails to disclose, teach, or suggest a plurality of discrete metallic flat portions orthogonally interconnected to simultaneously reinforce a plurality of sides and the end portion of the rigid structural shell that cooperate with the reinforced plastic or polymer material to form

a reinforcement wall at the end portion of the rigid structural shell. Further, Applicants do not believe that, in consideration of the cited documents, a skilled person in the art could be led to the claimed subject matter recited in claim 4 without extensive experimentation because, *inter alia*, the sandwiched arrangement of material that forms the casing of Langan is substantially different than the casing of the instant application.

Therefore, all of the features of claim 4 are not taught by JP '647 and JP' 840. Langan fails to fix the deficiencies of JP '647, JP '840, alone or in combination, without admitting that the references can be combined and reserving the right to argue thereagainst in future. As such, the Examiner is requested to withdraw his rejection of claim 4 depending from claim 1.

In regard to Rejection of Claim 7 Under 35 U.S.C. § 103(a)

The Examiner has rejected claim 7 under 35 U.S.C. § 103(a) as being unpatentable over JP 62-115647 in view of JP 9-259840, and further in view of Kilb US 5,789,096.

Kilb teaches a *flexible thin battery and method of manufacturing same* (title). The Examiner asserts that Kilb teaches a battery casing made of plastic reinforced with materials including glass and carbon. (Paragraph 1, page 5 of Office Action)

However, Kilb fails to disclose, teach, or suggest a plurality of discrete metallic flat portions orthogonally interconnected to simultaneously reinforce a plurality of sides and the end portion of the rigid structural shell that cooperate with the reinforced plastic or polymer material to form a reinforcement wall at the end portion of the rigid structural shell. Applicants do not believe that, in consideration of the cited documents, a skilled person in the art could be led to the claimed subject matter recited in claim 7 because some elements recited in claim 1 are not disclosed by any of the cited references.

Therefore, all of the features of claim 1, as amended, are not taught by JP '647 and JP' 840. Kilb fails to remedy the deficiencies of JP '647, JP '840, alone or in combination, without admitting that the references can be combined and reserving the right to argue thereagainst in future. As such, the Examiner is requested to withdraw his rejection of claim 7 depending from claim 1.

In regard to Rejection of Claim 19 Under 35 U.S.C. § 103(a)

The Examiner has rejected claim 19 under 35 U.S.C. § 103(a) as being unpatentable over JP 62-115647 in view of JP 9-259840, and further in view of Yamazaki et al US 2004/0029001.

Yamazaki teaches a *battery case forming sheet and battery packet* (title). The Examiner asserts that Yamazaki et al teach that a hard outer battery case can be made of polypropylene or polyurethane, among other resins. (Point 5, page 5 of Office Action)

However, Yamazaki et al fail to disclose, teach, or suggest a plurality of discrete metallic flat portions orthogonally interconnected to simultaneously reinforce a plurality of sides and the end portion of the rigid structural shell that cooperate with the reinforced plastic or polymer material to form a reinforcement wall at the end portion of the rigid structural shell. Applicants do not believe that, in consideration of the cited documents, a skilled person in the art could be led to the claimed subject matter recited in claim 19, that depends from claim 1, because some elements recited in claim 1 are not disclosed by any of the cited references.

Therefore, all of the features of claim 1, as amended, are not taught by JP '647 and JP' 840. Yamazaki et al. fails to remedy the deficiencies of JP '647, JP '840, alone or in combination, without admitting that the two references can be combined and reserving the right to argue thereagainst in future. As such, the Examiner is requested to withdraw his rejection of claim 19 depending from claim 1.

In regard to Claims 9 and 18

Claims 9 and 18 have been amended to correct punctuation errors.

In view of the above amendments and remarks, the Applicants respectfully submit that all of the currently pending claims are allowable and that the entire application is in condition for allowance.

Should the Examiner believe that anything further is desirable to place the application in a better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number listed below.

At the time of filing of the present response, the Office was authorized to charge the fees believed to be necessary to a credit card. In case of any under- or over-payment or should any additional fee be otherwise necessary, the Office is hereby authorized to credit or debit (as the case may be) Deposit Account number 502977.

Respectfully submitted,

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